

EDITORIAL



clinical

Impact of medical treatment on storage and voiding LUTS, nocturia, and quality of life in men at risk for progression

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Prostate enlargement is a very common pathologic condition [1]; male aging process is associated with a continuous worsening of both storage and voiding urinary symptoms, the development of nocturia, with the consequent decline of quality of life (QoL) and the risk of urinary retention and need of surgery.

Drugs are the first line of treatment to prevent the risk of progression. Several compounds, acting through different pathways are now available for both general practitioners and urologists. All these drugs are indicated – according to current literature [2] – to treat patients with moderate to severe LUTS, but there is poor evidence that can help both healthcare professionals and patients in making more aware personalized, data-driven decisions based on individual baseline parameters and risk factors.

The study from Gravas et al. [3] was designed to create a predictive analytics model to better understand how placebo, dutasteride, tamsulosin, or combination therapy impact on urinary symptoms (storage, voiding, QoL, nocturia, preventing disease progression), in different profiles of patients with BPE at risk of worsening, as defined by their baseline characteristics. Data were extrapolated by more than 9000 patients included in the CombAT study and placebo-controlled dutasteride monotherapy studies.

Several interesting results were reported in the manuscript. First of all, Gravas et al. confirmed what has been previously indicated both in Mtops and Combact studies: alpha-blockers and 5alpha reductase inhibitors act on different pathways within the prostatic gland and the bladder neck and their combinations allow to achieve higher improvement of all lower urinary tract symptoms as compared to monotherapy. Furthermore, this study also underlines that there is no specific patient profile that present better outcomes as compared to the other ones, even if in real life, only a few patients use combination therapy while in the majority of cases monotherapy is the first line of treatment.

Moreover, Gravas et al. identify age, use of Alpha blocker and Qmax as significant predictors of clinical outcomes. This is in accordance with a cross sectional study of Shao WH et al. where IPSS score, PSA, PV, and PVR significantly increased with age [4]. The risk predictors of BPH progression were positively correlated with age after 61 years, while PVR found to be determinant in storage and voiding scores. A systematic analysis of expert opinion in 2005 by Lowe FC et al., which included a panel of 12 urologists from 8 different countries, assessed the appropriate


of common treatments for LUTS/BPH [5]. 243 different patient scenarios were based on the permutation of values of clinical variables (total I-PSS, PV, PSA, Qmax and PVR) which were valued for the risk of disease progression. Authors concluded that symptom severity (total I-PSS 20–35), maximum flow rate (Qmax < 10 ml) postvoid residual PVR (>150 ml), are the most dominant factors of increased risk of disease progression focused on the impact of several “unfavorable” combinations rather than the impact of a single risk factor [5].

Another critical point evaluated by Gravas et al. was nocturia. Authors showed that PVR, age, Qmax and nocturia are predictors of change in nocturia and underline the role of treating disease mechanism, reinforcing therefore the value of 5 alpha reductase inhibitors. Gravas predicted the noteworthy benefit of the long-term effects of 5ARI-based treatment regarding nocturia and storage symptoms. According to Oelke et al [6], an analysis of 4-year CombAT data showed that combination treatment led to a significant nocturia improvement in terms of number of nocturnal voiding episodes over either monotherapy. Despite that LUTS/BPE is rarely life-threatening, nocturia on the other hand has been linked to increase mortality in men [7].

Finally regarding to QoL, the baseline covariates of total IPSS, Qmax, PVR and previous use of alpha blocker were the main predictors of QoL change. In particular, higher scores at baseline were predictive of greater improvement in QoL (IPSS-Q8) with CT as with monotherapy. This outcome is in agreement with data reported by Roehrborn et al. [8]: in a post hoc analysis of CombAT study, where CT showed greater improvement in IPSS at 48 months in comparison with tamsulosin, across all baseline subgroups and significantly improved Qmax compared to tamsulosin, but not compared to dutasteride as monotherapy. Therefore, even if all 3 therapies (CT, tamsulosin and dutasteride) have shown an improved Qmax to a different extent, most remarkable improvement is provided by CT. Previous use of alpha blockers appeared as a significant predictor of several outcomes. The changes in IPSS and Qmax regarding previous treatment of a blocker was also described by Roehrborn C et al. extracting a 2-year data from the CombAT study, where the effect of CT therapy was superior to tamsulosin and dutasteride in naïve and previously treated men [9].

In conclusion, predictive results indicate superiority of CT compared to any monotherapy, regarding all baseline parameters, even if pharmacoeconomic evaluations, and the increased risk of sexual related adverse event should be considered before prescription [10].

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AUTHOR CONTRIBUTIONS

MG: The corresponding author confirms responsibility for study, data collection and manuscript revision. PM: data collection and manuscript preparation. PS: helped in manuscript preparation.

COMPETING INTERESTS

The authors declare no competing interests.